Chicago Pneumatic
6 EAST 44th STREET, NEW YORK 17, N.Y.

PARTS LIST PNEUMATIC C-334-B

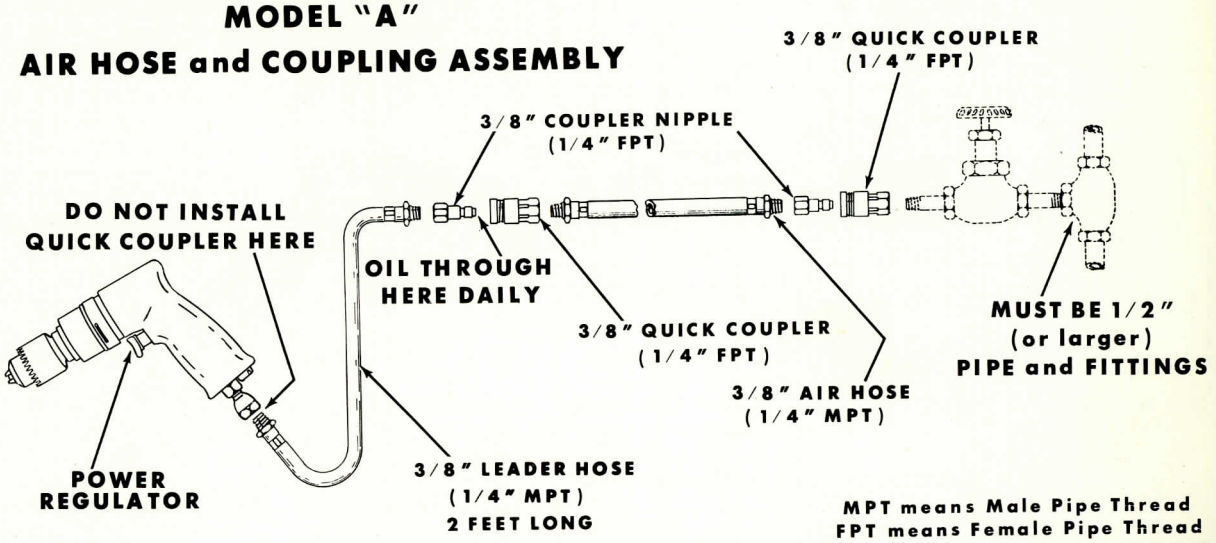
Third Edition Dated SEPTEMBER, 1963

Parts List Pneu C-334-B
Chicago Pneumatic
6 EAST 44th STREET, NEW YORK 17, N.Y.

CP-788-2750 AIR-DRILL

MODEL "A"

AIR HOSE and COUPLING ASSEMBLY



MPT means Male Pipe Thread
FPT means Female Pipe Thread

GENERAL INSTRUCTIONS

LUBRICATION

MOTOR

Daily before using and at the end of each shift, pour a liberal amount of gum solvent oil into the air inlet, connect tool and operate to allow oil to be carried to the air motor and to dissolve accumulations of gum and dirt and to flush them out the exhaust as well as to lubricate the moving parts of the motor.

GEARING

Monthly, remove spindle from tool, thoroughly clean old grease from idler gears and internal gear and pack about one teaspoonful of good ball bearing grease around gearing before reassembly.

AIR SUPPLY

An air compressor of at least one horsepower with 4 CFM delivery at 100 psi used with an air tank of at least 40 gallons capacity is recommended.

Pipe and pipe fittings between the compressor and hose outlets should be at least one-half inch pipe size (5/8" ID). Check piping to be sure there are no sags or dips where moisture can collect and restrict air flow.

All hose should be 3/8" ID or larger where less than 125 psi line pressure exists. Quick couplers with one-quarter inch pipe thread nipples, as shown in the illustration above, may be used except at the tool itself where they put excessive strain on the air inlet bushing and increase the overall size of the tool.

The use of smaller hose, even where higher line pressure exists, is not recommended.

IMPORTANT: For rated performance, 100 psi of clean, dry air is required AT THE AIR-DRILL. The above recommendations are the minimum requirements for obtaining the volume and pressure of air required for satisfactory tool performance.

OPERATION

Before starting work, drain water out of air compressor and blow condensation from air line. Blow down the compressor more frequently in hot, humid weather. The use of air line lubricators and filters is recommended.

Lubricate tool with gum solvent oil (see Lubrication), attach air hose and select a drill of the proper size, sharp and in good condition.

To adjust power of CP-788 Air-Drill, turn set screw (128) inside throttle trigger (14) using a 5/64" hex. Allen wrench. Turn screw clockwise to reduce power, or counter-clockwise to increase power.

CP-788 Air-Drill is rated for operation with a one-quarter inch drill maximum.

LOSS OF POWER OR ERRATIC ACTION

Loss of power or erratic action may be caused by factors outside the tool proper. Make the following checks.

1. Check for low compressor output and for restrictions in air supply caused by hose or connections of improper size or poor condition. See Air Supply.
2. Check for moisture in air tank and air line. Blow down compressor. See Air Supply.
3. Check drill condition and be sure drill points are sharp and ground at the correct angle.

If outside conditions are in order, proceed as follows.

Continued on Page 3

Supersedes Second Edition Dated SEPTEMBER, 1961

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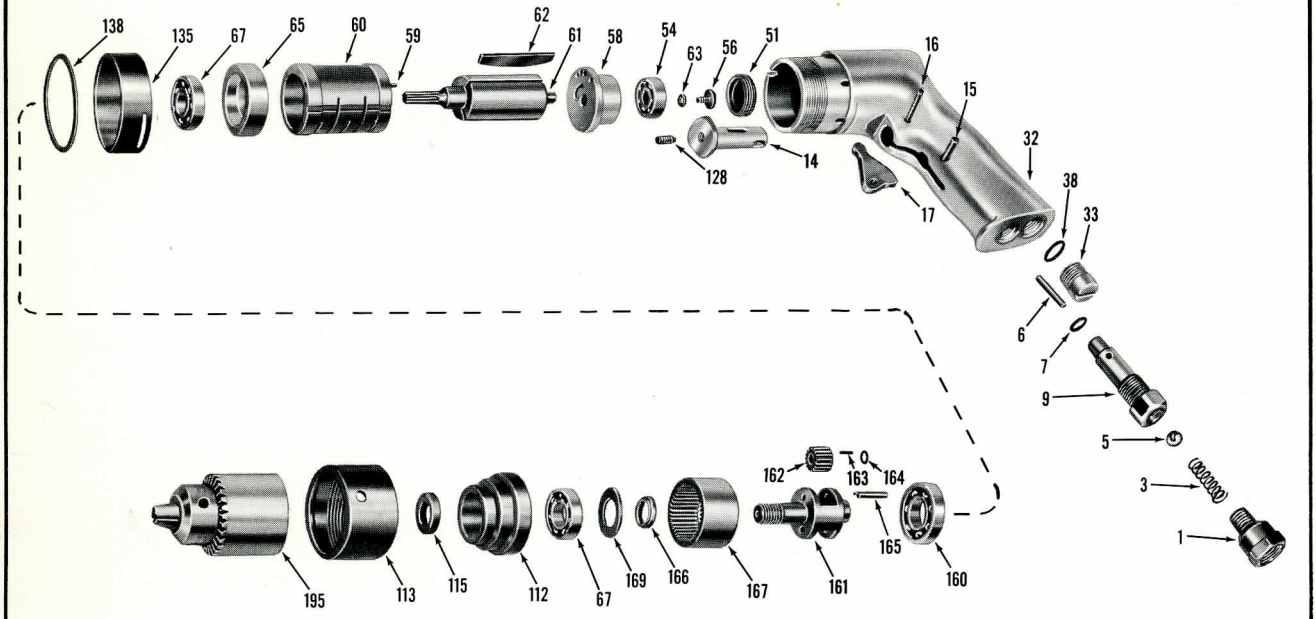
MODEL "A"



PARTS LIST

Index No.	CP Part No.	Description	No. Req'd.
1	C-69383P	Air Inlet Bushing	1
3	C-66135P	Throttle Spring	1
5	P-70416P	Steel Ball (5/16" Dia.)	1
6	C-66140P	Throttle Valve Pin	1
7	C-69083P	"O" Ring	1
9	C-86896P	Throttle Valve Body	1
14	C-99841P	Throttle Trigger	1
15	C-63880P	Pin (5/32" x 9/16")	1
16	C-91079P	Pin (7/64" x 3/4")	1
17	P-71564P	Throttle Lever	1
32	C-91273P	Motor Housing	1
33	C-90868P	Oil Plug	1
38	A-82777P	"O" Ring	1
51	C-67861P	Bearing Clamp Nut	1
54	S-25101P	Ball Bearing	1
56	C-68454P	Rotor Screw	1
58	C-69948P	Upper End Plate	1
59	C-40172P	Roll Pin (1/16" x 5/16")	1
60	C-40159P	Liner	1
61	C-85979P	Rotor	1
62	C-66327P	Rotor Blade	3
63	C-80512P	Washer (Special)	1
65	C-78564P	Lower End Plate	1
67	C-75878P	Ball Bearing	2
112	C-77437P	Bearing Cage	1
113	C-77433P	Motor Clamp Nut	1
115	S-75482P	Spacing Collar	1
128	C-99840P	Set Screw (#8 - 32 x 3/8")	1
135	C-77436P	Exhaust Deflector	1
138	C-77435P	Tension Washer	1
160	C-66342P	Ball Bearing	1
161	C-77455P	Spindle (3/8" - 24 Thd.)	1
162	C-87824P	Idler Gear	2
163	C-87823P	Needle Roller	18
164	C-75433P	Roller Retainer	4
165	C-66334P	Idler Gear Pin	2
166	C-77434P	Pin Retainer	1
167	C-77438P	Internal Gear	1
169	C-68163P	Fibre Washer	1
195	S-19145P	Jacobs Chuck (1/4") (Incl: S-11561P Chuck Key, Not Shown)	1

1. Disconnect leader hose and pour a liberal quantity of gum solvent oil into the air inlet. Flush out tool as described under Lubrication.
2. Disassemble tool, thoroughly clean and inspect for worn or damaged parts. Replace worn parts and be sure old or replacement rotor blades are a free, sliding fit in rotor slots. Relubricate and reassemble tool.

REPLACEMENT PARTS

Replacement parts or service may be obtained from your local jobber or the nearest CHICAGO PNEUMATIC Service Station listed in Service Station Directory SP-4025.

When replacement parts are required, order by CP Part Number and Description in the Parts List.

DISASSEMBLY AND ASSEMBLY

DISASSEMBLY - SUB ASSEMBLIES

1. Place chuck key in Jacobs chuck (195), hold drill in left hand and strike chuck key sharply in counter-clockwise direction with a mallet to start chuck. Remove chuck and spacer (115) from drill. Unscrew motor clamp nut (113) and remove tension washer (138) and exhaust deflector (135).
2. Screw a 3/8"- 24 hex. nut on spindle (161), grasp hex. nut in vise and pull motor housing off gearing.
3. Jar motor housing (32) with a soft faced mallet to remove motor from housing.

DISASSEMBLY - GEARING

1. Support bearing cage (112) on a V-plate and press on end of spindle (161) to remove gearing from bearing cage. Remove fibre washer (69).
2. Carefully press spindle out of ball bearing (160), applying pressure against rod placed in recess in spindle.
3. Remove pin retainer (166) from spindle and remove gear pins (165) and idler gears (162). Carefully remove roller retainers (164) and 18 needle rollers (163) from idler gears.
4. Carefully drive ball bearing (67) and internal gear (167) out of bearing cage (112).

DISASSEMBLY - MOTOR

1. Remove bearing clamp nut (51) from upper end plate (58) and remove rotor screw (56) and washer (63) from rotor (61).
2. Invert motor and place a V-plate under lower end plate flange of liner (60) or hold liner lightly in a vise and press or drive rotor from lower end plate (65). Remove liner and rotor blades (62). Do not remove roll pin (59) unless replacement is necessary.
3. Support upper end plate (58) in an arobr press and, placing a rod against end of rotor, press rotor out of upper end plate.
4. Do not remove ball bearings (54, 67) from end plates (58, 65) unless replacement is necessary.

DISASSEMBLY - MOTOR HOUSING

1. Remove oil plug (33) from housing (32) and remove "O" ring (38) from plug.
2. Remove inlet bushing (1) from throttle valve body (9) and remove throttle valve body from housing. Remove throttle valve pin (6) and "O" ring (7) from body. Unless replacement of parts is necessary, do not remove throttle spring (3) and steel ball (5).
3. Drive lever pin (15) and trigger pin (16) out of housing and remove trigger (14) and throttle lever (17) from housing. If replacement is necessary, remove set screw (128) from trigger.

ASSEMBLY - MOTOR HOUSING

1. Place lug on throttle lever (17) through wide slot in trigger (14) and place parts in motor housing (32). Drive lever pin (15) through housing and lever and drive trigger pin (16) through housing and trigger. Thread set screw (128) into trigger.
2. Insert steel ball (5) in throttle valve body (9) and thread throttle valve spring (3) into body. Place "O" ring (7) on body and insert valve pin (6) in body and screw body into housing. Screw inlet bushing (1) into body.
3. Place "O" ring (38) on oil plug (33) and thread plug into housing.

ASSEMBLY - MOTOR

1. Applying pressure on outer race, press ball bearing (67) into lower end plate (65).
2. Applying pressure on inner race of bearing, press lower end plate on splined end of rotor (61) until rotor binds against end plate. Hold end plate and tap splined end of rotor until rotor turns with a very slight drag against end plate.
3. Place roll pin (59) in end of liner having milled recess in face and place liner on lower end plate. Place lightly oiled rotor blades (62) in rotor.
4. Slip upper end plate (58) on rotor, entering roll pin in liner in blind hole in end plate.
5. Applying pressure on inner race, press bearing (54) on rotor and into end plate. Support rotor on pinion end on bed of arbor press and press end plate on rotor as tightly as possible and still allow liner and end plates to turn on rotor.
6. Screw rotor screw (56) without washer (63) down tightly on end of rotor until end plates are snug against rotor and all end play is removed. Remove screw, place washer (63) on screw and retighten screw into rotor.
7. Pack a good ball bearing grease in clamp nut (51) and tighten into upper end plate. Place assembled motor in a V-block and lightly strike flanges of liner and end plates with a mallet to bring parts into line.

Continued on Page 4

ASSEMBLY - GEARING

1. Place pin retainer (166) on spindle (161) with shouldered side toward threads on spindle. Place fiber washer (169) on retainer and, applying pressure on the inner race, press bearing (67) on spindle.
2. Grease interior of idler gears (162) with a good ball bearing grease and place nine needle rollers (163) in each gear. Place roller retainers (164) in ends of gears.
3. Place gears in spindle and enter gear pins (165) through spindle and gears with notched ends fitting over pin retainer (166).
4. Applying pressure on inner race, press bearing (160) on hub of spindle.
5. Applying pressure on outer race, press bearing (67) into bearing cage (112). Press internal gear (167) into bearing cage with smooth bearing recess facing out.
6. Lubricate spindle and idler gears with about one teaspoonful of good ball bearing grease and place spindle in internal gear, meshing idler gears with internal gear. Applying pressure on outer race, press bearing (160) into bore of internal gear.

ASSEMBLY - SUB ASSEMBLIES

1. Heat motor housing in an oven to no more than 250°F and slip motor into housing. Be sure rotor turns freely after motor is seated in housing.
2. Place gearing on splined end of rotor, meshing rotor splines with idler gears.
3. Place exhaust deflector (135) and tension washer (138) on motor housing and tighten motor clamp nut (113) against tension washer.
4. Place spacing collar (115) on spindle and screw chuck (195) on spindle.

CHICAGO PNEUMATIC BRANCH OFFICES

ATLANTA 9, GA. ..... 517 Armour Circle, N.E. (Phone: 404-874-8696)
BIRMINGHAM 4, ALA. ..... 810 5th Avenue North (Phone: 205-251-6289)
BOSTON, MASS. ..... 76 Lincoln St. (Brighton 35) (Phone: 617 ST-2-8088)
BUFFALO 23, N.Y. ..... 1591 Kenmore Avenue (Phone: 716 TRinity 3-1067)
CHICAGO, ILL. ..... 2525 Lexington Street, Broadview, Ill. (Phone: 312-921-0300)
CINCINNATI 29, OHIO ..... 4511 Reading Road (Phone: 513 JE-1-6325)
CLEVELAND 14, OHIO ..... 1643 Superior Avenue (Phone: 216 MAin 1-8065)
DALLAS 7, TEXAS ..... 2257 Vantage Street (Phone: 214 MElrose 1-0230)
DENVER 4, COLO. ..... 505 Bryant Street (Phone: 303-292-1292)
DETROIT 26, MICH. ..... 570 East Larned Street (Phone: 313 WO-1-3841)
HOUSTON 23, TEXAS ..... 2120 Canada Dry St. (Phone: 713 WA-3-4601)
INDIANAPOLIS 18, IND. ..... 3760 Kinnear Ave. (Phone: 317 WA-3-2547)
KANSAS CITY 29, MO. ..... 7903 East 50 Highway (Phone: 816 FL-6-3623)
LOS ANGELES 22, CALIF. ..... 6935 Bandini Blvd. (Phone: 213 RA-3-8731)
MILWAUKEE 13, WISC. ..... 5820 W. Blue Mound Rd. (Phone: 414 BLue Mound 8-2080)
MINNEAPOLIS 6, MINN. ..... 2812 East 26th St. (Phone: 612 PA-1-5725)
NEW ORLEANS 19, LA. ..... 3303 Tulane Ave. (Phone: 504 HU-2-5715)
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PHILADELPHIA, PA. ..... 312 East Lancaster Ave., Wynnewood, Pa. (Phone: 515 MI-9-9300)
PITTSBURGH 13, PA. ..... 369 Coltart Ave. (Phone: 412 MUseum 1-9822)
ST. LOUIS 17, MO. ..... 8029 Litzsinger Rd. (Phone: 314 MIssion 5-7511)
SALT LAKE CITY 1, UTAH ..... 156 West 4th South (Phone: 801 Elgin 5-2985)
SAN FRANCISCO, CALIF. ..... 145 Mitchell Ave., So. San Francisco, Calif. (Phone: 415 JU-9-2342)
SEATTLE 4, WASH. ..... 2901 First Avenue, South (Phone: 206 MAin 2-3930)
TULSA 15, OKLA. ..... 2239 N. Harvard Ave. (Phone: 918 WEbster 9-4475)

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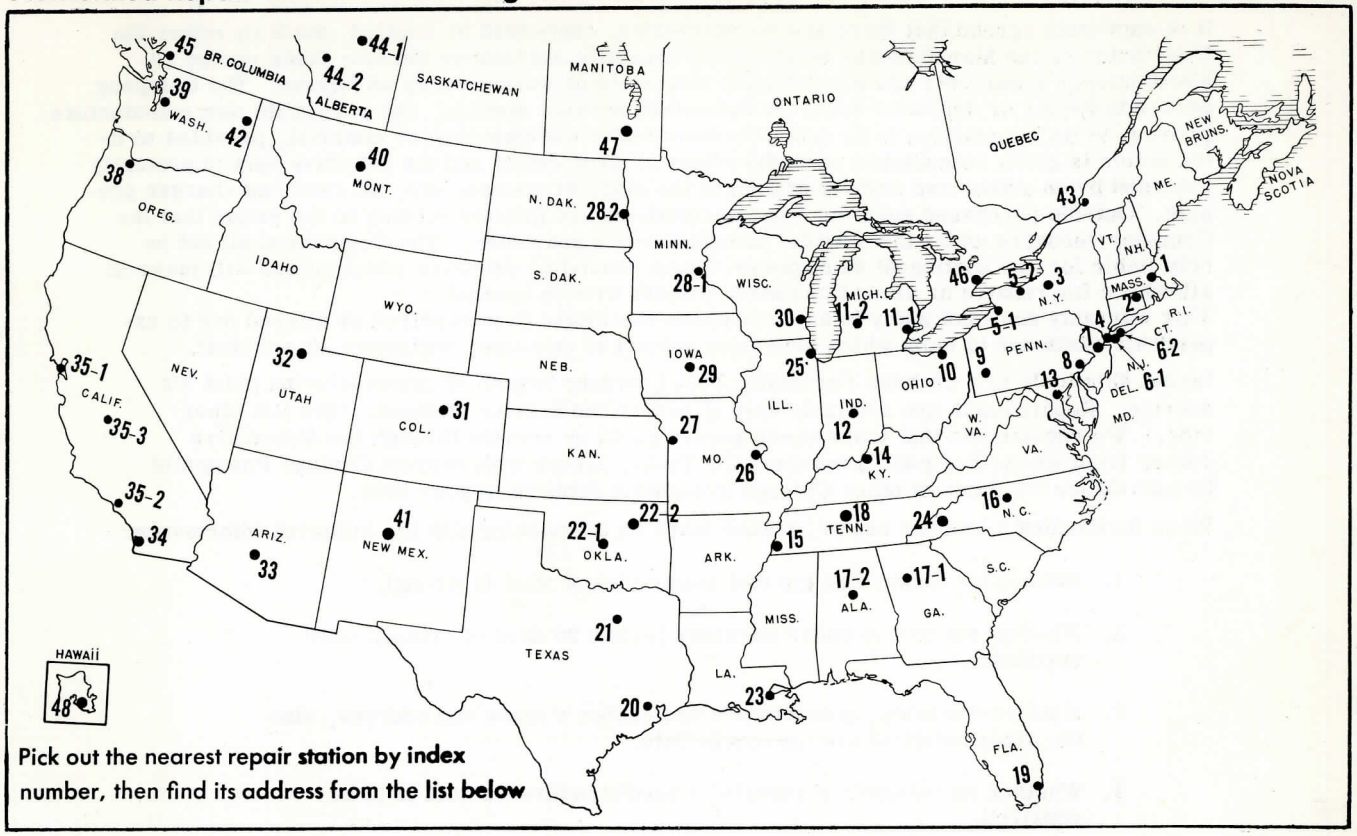
Authorized Repair Stations For Chicago Pneumatic Automotive Tools

SP-4025

33 rd Edition JANUARY, 1964



Pick out the nearest repair station by index number, then find its address from the list below

1 - (A) Boston Hydraulic Service
1182 Columbus Avenue
Boston 31, Mass.

2 - (B) John The Jack Man
P. O. Box 33
Stafford Springs, Conn.

3 - (B) Duplex Equipment Co.
213 Grand Avenue
Syracuse 4, New York

4 - (A) Corona Air Equipment Co., Inc.
960 Close Avenue
Bronx 72, New York

5-1- (B) Buffalo Hyd. Jack Service
1675 Broadway
Buffalo 12, New York

5-2- (C) Buffalo Hyd. Jack Service
16 Leavenworth Street
Rochester, New York

6-1 - (A) White Tool Service
1386 Bushwick Avenue
Brooklyn, New York

6-2 - (C) White Tool Service
223 Hempstead Turnpike
West Hempstead, N.Y.

7 - (A) The Air-Drolics Co.
735 Lincoln Blvd.
Middlesex, N.J.

8 - (A) Equipment Service Company
1921 Callow Hill Street
Philadelphia 30, Pennsylvania

9 - (A) Mac's Hyd. Jack & Equip. Serv.
5804 Centre Avenue
Pittsburgh 6, Pennsylvania

10 - (A) Electrical Tool Service, Co.
3734 Payne Avenue
Cleveland 14, Ohio

11-1- (A) Hydraulic Service, Inc.
2715 Fifth Street
Detroit 1, Michigan

11-2- (C) Hydraulic Service Inc.
449 Market Street S.W.
Grand Rapids, Michigan

12 - (A) Electric Tool & Motor Serv. Inc.
1001 No. Illinois St.
Indianapolis 4, Indiana

13 - (A) Baltimore Hydraulics, Inc.
108 Front Street
Baltimore 2, Maryland

14 - (A) Queen Hydraulics Co.
1226 Rowan Street
Louisville 3, Kentucky

15 - (B) Jack Flint & Sons
244 Jefferson Avenue
Memphis, Tennessee

16 - (A) Power Tool Service, Inc.
867 Huffman Street
Greensboro, N.C.

17-1- (A) Tool Service Company
225 Simpson Street, N.W.
Atlanta 13, Georgia

17-2- (C) Tool Service Company
716 13th Street North
Birmingham, Alabama

18 - (B) Tennessee Electric Motor Co.
408 6th Avenue South
Nashville, Tennessee

19 - (A) Nieman-Wilson, Inc.
274 N.W. 54th Street
Miami 37, Florida

20 - (A) Hydraulic Equipment Service Co.
1021 North San Jacinto Street
Houston 2, Texas

21 - (A) Commercial Parts, Inc.
3806 Ross Avenue
Dallas 4, Texas

22-1- (B) Hydraulic Equipment Company
417 West California Street
Oklahoma City 4, Oklahoma

22-2- (C) Hydraulic Equipment Company
2221 S.W. Blvd.
Tulsa, Oklahoma

23 - (A) Beerman Precision Mach. Wks.
2021 Thalia Street
New Orleans 12, La.

24 - (A) Retreaders Supply Company
35 Eagle Street
Asheville, North Carolina

25 - (A) Servall Engineering Co.
3937 North Kedzle Ave.
Chicago 18, Illinois

26 - (A) Standard Electric Co., Inc.
3880 Washington Blvd.
St. Louis 8, Missouri

27 - (A) Heath Electric Service Co.
518-20 East 16th Street
Kansas City 8, Missouri

28-1- (A) General Parts & Supply Co., Inc.
593 No. Fairview
St. Paul 4W, Minnesota

28-2- (C) General Parts & Supply Co., Inc.
806 Main Avenue
Fargo, N. Dakota

29 - (A) Turner's Hydraulic Service
1617 - 6th Avenue
Des Moines 14, Iowa

30 - (A) Hader Industries
4916 N. 125th Street
Butler, Wisconsin

31 - (A) Automotive Tool Service
859 Santa Fe Drive
Denver 4, Colorado

32 - (B) Wilson Transport Supply Co.
665 South State Street
Salt Lake City, Utah

33 - (A) Air Draulics Company
3135 N. 29th Avenue
Phoenix 17, Arizona

34 - (B) Authorized Equipment Serv.
420 West Beech Street
San Diego 1, California

35-2- (A) Kimmerle Bros.
2300 S. Hill Street
Los Angeles 7, Calif.

35-3- (C) Kimmerle Bros.
2230 Inyo Street
Fresno 21, Calif.

35-1- (A) Kimmerle Bros.
226 - 11th Street
San Francisco 3, Calif.

38 - (A) Karn Repair Service, Inc.
1215 S. W. 16th Avenue
Portland 5, Oregon

39 - (A) Universal Repair Shop
1611 Boylston Avenue
Seattle 22, Washington

40 - (C) Mosch Electric Company
109 Second St. South
Great Falls, Montana

41 - (C) Appliance Service Center
5505 Silver Avenue S.E.
Albuquerque, New Mexico

42 - (C) K & N Electric Motors, Inc.
1311 N. Washington Street
Spokane 1, Washington

43 - (A) Instrument Sales & Service
1089 Bleury Street
Montreal, Quebec

44-1- (C) Paramount Industries, Ltd.
1029 9th Avenue
Calgary, Alberta

44-2- (C) Paramount Industries, Ltd.
10560 - 115th Street
Edmonton, Alberta

45 - (C) Hyd. Service & Equip. Co., Ltd
100 East 2nd Avenue
Vancouver, British Columbia

46 - (A) Canadian Pneu. Tool Co. Ltd.
198 Evans Avenue
Toronto 14, Ontario

47 - (C) Kings Electric Motors
835 Main Street
Winnipeg, Manitoba

48 - (C) Art C. Neely, Inc.
825 Keeaumoku Street
Honolulu 14, Hawaii

(Over)

MANUFACTURER'S WARRANTY

It is expressly agreed that there are no warranties, expressed or implied, made by either the Distributor or the Manufacturer on Chicago Pneumatic Automotive Service Tools except the Manufacturer's warranty against defective materials or workmanship as follows: The Company agrees to repair or duplicate F.O.B. its authorized service stations, any part of its own manufacture proving to its satisfaction to be defective from faulty workmanship or material, provided written notice is given immediately upon discovery of such defect and the defective part is promptly returned by an authorized service station to the place of manufacture, all carrying charges prepaid. Outside purchased equipment and accessories are guaranteed only to the extent that the Company recovers under the original manufacturer's guarantee. The Company shall not be held liable for any contingent damages or delays caused by defective material and will make no allowance for repairs or alterations made without written consent.
This warranty shall not apply to any tool which shall have been repaired or altered nor to expendable parts nor to tools which have been subject to mis-use, negligence or accident.

Do not ship tools to a Chicago Pneumatic Tool Company branch or manufacturing plant for service. Repair parts are available only at authorized Service Stations. (See list other side.) We recommend that tool owners secure parts or service through the Automotive Jobber from whom they purchased their CP Tools. Check with nearest Chicago Pneumatic Branch Office for name of other Chicago Pneumatic Jobbers in your area.

When forwarding a tool for repair, please mark on the packing slip the following information:

1. Reason for forwarding the tool (some idea of what is wrong).
2. Whether the tool is under warranty (within 90 days of original user purchase).
3. If under warranty, give owner's and Jobber's name and address, also the actual original user purchase date.
4. Whether an estimate of repairs is needed before the tool is to be repaired.

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IN CANADA

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